Teacher Education

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The Science Tradition

E. M. R. LAMKEY*

THE writer's earliest recollection of Illinois State Normal University was that of a school steeped in scientific tradition. As time passed, that impression became further strengthened. Indeed, there were heard scattered whisperings that Normal's scientific inclinations were so strong that she might be in danger of losing her soul! By the time this writer had finished graduate work and had received an appointment at Illinois State Normal University, impressions had given way to specific information in regard to Normal's position in the field of sceince.

This strong tradition of science, originating in the teaching of the biological sciences at Illinois State Normal University, had received early impetus through the selection of the University as the seat of two great ventures, the State Museum and the Illinois State Natural History Society, later called the Illinois State Laboratory of Natural History. These two institutions became the center of biological research for the entire Mississippi Valley and acquired world-wide fame. With matchless museum facilities and visible results of very practical and timely investigations, the school soon acquired an excellent reputation as a center of biological education. Illinois, as a pioneer state, was leaving no stone unturned in the discovery of her natural resources and in the turning of these resources to good account.

Thus, very early, with the exception of a brief exploration period, during which a certain biologist attempted to transplant tide-water zoology bodily to the prairie, a type of education directly concerned with the needs of the commonwealth was established. Extremely close contacts were made with virtually every school in the state. The natural science department supplied biological material, specimens, museum preparations, and teaching aids at all levels, from that of small rural schools to that of colleges. In addition, the first vacation school was opened with an efficient staff that was to give instruction in the use of these materials and to make clear the scientific phenomena entering into every day activities. This school was the forerunner of the modern biological summer camp.

It is interesting to note that these studies were referred to as "natural science" and that today the University has chosen to perpetuate this term rather than the more common and uncertain term, "nature study." Likewise, this same method of study has been extended. More significance is now attached to the museum as a teaching asset through the stimulation brought about by recent gifts and a decesion to develop the collections by adequately housing them in the new Milner Library.

An added reason for the early educa-

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tional prominence of the biological sciences here may be found in a statement taken from an early University catalog. In this catalog, Dr. S. A. Forbes states: "No student wishing to make a detailed study of any branch of the natural history of Illinois need hesitate to come here with that design. If anything be found lacking for this purpose the authorities of the institution stand ready promptly to supply it."

This tradition of public service to the commonwealth, once established at this University, persisted long after the removal of the Museum to the state capitol and the transfer of the survey to the University of Illinois. Consequently, in the department of biological sciences here, no educational revolution has been necessary at any time. The department has prospered by continuing to meet educational needs as Illinois has shifted from a strictly pioneer and agricultural state to one that is highly industrialized and urbanized. At the present time, a highly trained and experienced staff of eleven continues instruction in the fields of botany, zoology, bacteriology, entomology, health, human anatomy, and the natural sciences for elementary schools, in so far as these subjects apply to every day living and human progress. Still the watchword of the department is service. Its chief pride is in the service which it renders to the University as a whole, in addition to its task of developing teachers of science for the secondary and elementary schools of Illinois.

The History of the Museum

BLANCHE MCAVOY*

THE teaching of all sciences, but more particularly the teaching of the biological sciences, got off to an earlier and a stronger start in Illinois State Normal University than did similar teaching in any other of the mid-west colleges. This was due to the fact that in 1858 the State Natural History Society of Illinois was founded with its headquarters at the newly established Normal University.

A Natural History Society demanded a museum. The interest in collecting and preparing materials for this museum made Normal the center of biological work for the state for a long enough time to get the interest in biology well entrenched in Illinois State Normal University. Whereas, in those early days, many of the faculties in the other colleges in the midwest were worrying over the seeming conflicts between religion and science, at Illinois State Normal the enthusiastic study and firsthand knowledge of biological materials prevented any serious conflicts, and put biology on a coordinate basis with all other subjects in the curriculum.

In the early days the Museum was

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housed at the east end of the third floor of what is now Old Main. The Natural History Society had its headquarters in the Museum from the time the Museum was established until 1885, at which time the Natural History Society, now known as the Illinois State Laboratory of Natural History, was moved to Urbana. A third of the Museum material went with this Laboratory to Urbana, a third went to the newly created State Museum at Springfield, and another third remained on this campus. In 1892, this remnant was housed in the newly-built Cook Hall. It remained in Cook Hall in poorly-constructed and dusty cases until the David Felmley Hall of Science was built. Then the museum materials were moved carefully and packed away in the attic of the science building. Most of these specimens have been worked on, cleaned and repaired in the last ten years, and were ready to be put into the excellently built alumnimum and plate glass dust-proof cases in the Museum of the new Milner Library, when that building was completed.

These museum rooms in the Milner Library, although rather extensive, are not large enough and the case space is not adequate to house all the valuable museum material which are on hand, but they do offer a splendid beginning toward getting a great many of the valuable materials out where they can be used by students and public alike.

The Museum was supported by voluntary contributions during part of the first decade. J. A. Sewell, who came to the faculty in 1861, taught the science courses and was in charge of the Museum. In 1867, the legislature appropriated twenty-five hundred dollars for the Museum. After this appropriation had been made, John Wesley Powell was made curator and was authorized to start his famous explorations in the West, especially the explorations of the Grand Canyon of the Colorado.

In 1888, George Vasey came to the science faculty and helped with the Museum and with the explorations. These two men, working out of the Museum of the Natural History Society here at Normal, became in time world-known figures, Powell in geology and Vasey in botany, especially in the botany of grasses and range plants. These two men retained their connection with Normal until 1872. Vasey left to the University a large herbarium, in which are very excellent sheets of grasses collected in Illinois and all through the West. Powell built up a large and valuable collection of fossils, shells, and minerals. Most of these valuable collections are still stored away, awaiting the time when more cases are secured in which to make these materials available to the public.

While John Wesley Powell was in the West, he sent to the Museum many valuable specimens, such as birds and Indian relics, in addition to his famous fossils and shells. Mrs. Powell, too, must have been in the West with the expedition because, although there seems to be no historical record of her accompanying her husband, there are records concerned with her work. These records are found in the old accession book and among the bird spec-

imens of many western birds which she collected in Colorado and neighboring places during the years of the expeditions when the Grand Canyon of the Colorado was being explored.

In 1872, S. A. Forbes became the curator of the Museum and remained here until 1884. He became the first advocate of the teaching of nature study in Illinois public schools. A. B. Seymore, who later went to Harvard, made a fine collection of plant diseases in the early eighties. This collection he left to the Museum here. Both Forbes and Seymore became internationally known.

A. H. Worthen was the director of the first Geological Survey of Illinois from 1858 until 1872, with headquarters at Springfield. He was a very scholarly scientist, who collected and studied animal fossils from the Mississippian rocks of southern Illinois and Indiana. The Museum owns some fifty or sixty excellent fossils which he collected and labeled. The fact that geologists and paleontologists from all over the world have taken notice of the work and writings of this man makes this collection very valuable.

In addition to this collection, there are about four specimens that have been labeled by Lesquereux. It is barely possible that, when all the truth is known about all the specimens of fossils in this Museum, the collection may include a type specimen or two.

Jesse Fell's daughter, working for the Museum in the early eighties, made an extensive herbarium of local plants, which is still in the Museum. Later in her life, after she became Mrs. Treakle, she made a large personal collection of Western plants, which she gave to the Museum a few years before her death. Many other persons have contributed to the collections, such as Mildred Felmley and Mrs. Aldrich, who gave their student herbaria, and the Burtis family, who have given a beautiful collection of mounted birds.

It is interesting to note that the first selective admission ever applied here at Normal was in 1878 when, from a large number of candidates, fifty of the best were chosen for the vacation science school conducted in connection with the Museum. It is further interesting to note that T. J. Burrill, a Normal graduate, who served on the staff of the University training school and who afterward established and taught the first course in bacteriology in the United States at the University of Illinois, was on this vacation science school faculty. The University owes a great deal to Dr. Burrill because, in addition to his pioneer investigations on plant diseases, he was the teacher of many men who became the bacteriologists of the United States. As a matter of fact, near the end of Dr. Burrill's life, he had in his classes the man who is now head of the biology department as well as the man who is now president of Illinois State Normal University.

Educational Value of the Natural History Museum

NINA E. GRAY*

SINCE its beginning in 1858 as the Museum of Natural History for the State Natural History Society of Illinois, the Illinois State Normal University Natural History Museum has served education in very practical, yet scientific ways, having adapted its types of services to fit the current educational needs, whenever possible. The first concern has been to accumulate permanent collections of museum specimens representative of the natural resources of the state; the second concern has been to make these collections available to the public in a manner that would stimulate interest in and further the knowledge of the natural sciences.

Permanent collections have gradually been established through donations of personal collections made by the original members of the State Natural History Society and by numerous other friends of the Illinois State Normal University.

The problem of making possible the maximum service of the Museum to the public has been worked out in various ways throughout the years, but its full solution has been hampered greatly by the lact of adequate and suitable facilities for displaying the museum materials, as well as the lack, at times, of a trained curator in charge of museum projects. Under the direction of Stephen A. Forbes, 1872-1884, small collections of museum specimens especially selected to provide the best possible illustrative material for the particular fields of science involved, were prepared and sent to various public schools throughout the state of Illinois, where they could be kept permanently so long as the school used and took care of them. This plan made available only those specimens of which the Museum had many duplicates and which lent themselves to successful packing and shipping. Much museum material is too valuable and too easily injured or ruined to be subjected to the hazards of packing and shipping. This type of service was, of necessity, limited. In return for these donated collections, the public schools were asked to collect, preserve and send in to the Museum a number of the various specimens in their respective localities so that more collections could be made up for additional schools. Such a procedure not only built up the specimens in the Museum, but also proved to be a great stimulus to increasing the interest in the various branches of natural history throughout Illinois.

With the introduction of laboratory work into the teaching of subjects dealing with the natural sciences, the donation of collections to public schools

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was less necessary and finally ceased. The Museum thereafter became centralized and has had to serve its public from a permanent location. At the present time, in Milner Library the Illinois State Normal University Museum can house and display its specimens in a manner compatible with making them be of the most possible use.

The Museum now serves as a source of material for students in the natural sciences throughout the elementary, secondary, and university levels to use (1) to get acquainted with certain representatives of the local fauna, flora, and fossils, (2) to gain practice in tracing down the exact scientific identity of a specimen, i.e., key different forms, (3) to make comparisons of forms seen in the field with museum specimens for the sake of establishing correct identity, and (4) to realize the meaning of migration habits, habitat groupings, and family relationships, and thus to see how such museum specimens and displays present some of the fundamentals underlying ecology, functional anatomy, conservation, and classification.

The Museum serves the sportsman also as a friendly place where he can identfy or verify the identification of plants and animals noted in the out-of-doors. He can also learn that there are fundamental biological principles underlying the ecology and conservation of wild life and may thus be stimulated to search publications for more allied information. It may help him be a more intelligent and active enthusiast for efficient legislation to protect and perpetuate plant and animal wild life.

The general public, adults and children alike, find the Museum an attractive and interesting place. This fact can be verified by observing the number and types of visitors coming to the Museum at almost any hour. Men and women who have dropped in to look around between buses stay to browse for an hour or two, forgetting about the length of time they had meant to spend. Children come and go at all times. They visit their special museum friends, call attention of others to these friends, and then wander about looking at various specimens. College students come in and browse during a free hour. For these groups of people the Museum can offer its most far-reaching service, namely, the opportunity to become conscious that there are many interesting things to be observed and understood in the out-of-doors and to stimulate people to go out in search of some of these things as well as to investigate the publications pertaining to them. All of these services may make these individuals understand their external biological environment better and realize its important relationship to their own everyday life, welfare, and well-being.

Teacher Training on the Secondary Level

OPAL HARTLINE, JOHN FRALEY, AND BERTHA ROYCE*

A FIELD of science which deals with life as expressed in countless numbers of living units, individuals and interdependent groups, is one that challenges the attention and stimulates the interest of anyone who gives it thought. The value of its findings carried over into practice in relation to man's welfare is immeasurable. Realization of the possibilities of service, even of obligation to serve, in the many communities open to teachers of science at the secondary level causes those who participate in the training of high school teachers to make serious evaluation of the adequacy of such training.

Though the preparation of high school teachers of biology is part of the work of the department of biological sciences at Illinois State Normal University, this preparation is not its most important function. Every student in the University has one or more classes in which he has opportunity to study fundamental biological principles and to learn application of such principles. The principles and practices of several departments such as those of home economics, agriculture, health and physical education as well as physical science are closely integrated with those of biological science. There is, then, an exchange of service in these areas. Such exchange makes for efficiency.

This service is developed in accordance with the present philosophy of education underlying the training of high school teachers and gives all prospective teachers, whatever their teaching fields, the opportunity to acquaint themselves with certain principles of biology and also makes it obvious to the majors in biology that their field in high school in going to extend far beyond their own department. The belief that some understanding of factors determining man's welfare and his position in the biological world is essential has guided the biology department in its offerings. A serious attempt is made to make possible for students an understanding which is based upon knowledge of the nature of protoplasm and its functioning, of heredity, evolution, and the interdependence of all living things as well as the understanding of their social significance.

As a further service, the department of biological sciences offers specific training in those phases of biology which are essential for the equipment of science teachers. No teacher, by Illinois law, may teach general science in the high schools of the state without some training in biology. Through this cooperation, then, with the other departments of sciences it is believed that a valuable contribution to the preparation of effective teachers is made.

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Through the efforts of such teachers, the training of the citizenry of the state is influenced in ways and to a degree which can scarcely be estimated. These teachers must be equipped with a fund of information gained through an ability to observe accurately, to recognize significance of results observed, to reason to justified interpretations, and to see a relationship with further application of the principles. Awareness of such needs guides those who contribute to the training of teachers. Hence, students are given every opportunity to make individual and independent observations, to study materials first, to sort out the relevant from the irrelevant, and to apply in new situations until reasoning becomes, in many cases, a pleasure and a common practice. In supplying the opportunities for such experience in the scientific method of learning the staff of the department finds that an intensive and independent study of materials is of prime importance and must be emphasized in all of the training. This study is carried on in the laboratory,—the term laboratory is used in its broadest sense,— under the guidance of a well-trained staff, so that the experiences are those of a guided study. As a necessary accompaniment of the observation and experimental procedures, records, also individual and independent, are kept. These are of several kinds and are looked upon as records of data assembled, and are followed by interpretations and summaries of learned material. Students grow to consider their notebooks as important records of their own studies and value these records as aids in learning, as records for further investigation and as an aid to review of the work accomplished, not, as sometimes happens, just a pretty piece of busy work.

It might seem that anyone knows the difference between what he sees and what he thinks about what he sees. A device being used, in which students have been asked to study materials and to record under headings *I see* and *I think,* later followed by *I learn,* has been the means of pointing out to them that they are confusing what they see with what they think and are jumping to interpretations unjustified on the basis of the study.

It is almost unbelievable how much effort is required at first for students to describe in non-technical words what they are seeing. Can it be that, by the use of objective tests and visual instruction, opportunities for students to express themselves in clear-cut English are being taken away? Over and over the question will come, "Is this what I'm supposed to see?" Invariably the answer, "What do you see?" finally develops an awareness of the idea of the fact as fact rather than supposition.

Later, when the students go to textbooks and other references and find that authors of authority have made the same observation and interpretations, students feel a sense of accomplishment. As a result, renewed interest and zeal mark the next attack on problems offered. But they learn, too, that they may have been dealing with coincidences, not cause and effect relationships. That realization, too, is a stimu-

lating experience. This procedure is followed by the recognition and appreciation of the accomplishments of others in their many contributions to man's welfare. These contributions can be more completely evaluated when considered along with arduous effort of the student himself.

During all of their work in subject matter classes, students make contacts with different points of view. Through it all, however, runs the consistent philosophy of the department. This philosophy determines the objectives that are the goal toward which the training strives. The culmination of student experiences comes in their year of student teaching under the guidance of an expert supervisor.

The philosophy and the objectives that a supervisor has in the training of student teachers must of necessity be tied up with the objectives and philosophy that the same teacher holds toward the education of high school pupils. The choice of subject matter and the methods of its presentation in any high school biology class must depend on what the teacher wished to do for the high school pupils in the class.

The first thing that seems imperative for the high school student teachers to do is to learn to teach facts of biology with such accuracy and clearness that the pupils may get a clear vision regarding the principles of healthful living, the facts of heredity, the fundamental problems of reproduction, the control of communicable diseases, the appreciation and the recreational uses of the out-of-doors, and an intelligent appreciation of the problems of conservation. These undertsandings should give the pupils an appreciation of life, a breadth of view and interest that may result in fullness of living, and a richness of self-expression that will enable them to come to an understanding of fundamental truths and thereby establish the principles upon which the adjustments of life should be made. To accomplish this purpose requires high-grade scholarship on the part of the senior biology teachers.

Merely to train a student teacher to teach the facts of biology is not, however, the whole thing. In truth, it is not the most important thing. A student teacher must be able to guide a high school pupil in doing independent work and work which represents the pupil's best effort. This teacher must learn how to stimulate pupils to improve in their work and he must learn how to be sensitive toward each little movement in the right direction.

Since pupils must learn more and more how to get on with other people, the student teacher must be trained in the direction of group activities and experiments which will cause the pupils to learn cooperation. It is one of the biggest problems with which the student teachers must cope. Moreover, they must learn how to guide the adolescent pupil in matters of honesty. Pupils need very close supervision in the writing of their conclusions to experiments so that there is no temptation for one pupil to copy the work of another. Drawings from text books must never be substituted for one's own. The teacher must instill in the class a feeling for the decency of honest work.

When matters of reproduction are to be taught, the student teacher must learn to give the pupils a high respect for all things relating to this matter. Closely allied to this problem is that of helping students to learn healthful activities as distinguished from learning facts about health.

Training student teachers to become conscious of the importance of learning how to do all these things and trying to get them to acquire certain skill in accomplishing them, must be the work of the critic of biology. In these classes, which are conducted by the supervised study method, all types of supervised study are applied to the class activities. Affiliated schools offer a part of the training also.

Additional opportunities are offered high school pupils through an extra daily conference hour when they may consult student teachers or their supervisors. This is of especial value for those pupils needing encouragement and assistance in making up work. Through a science club, which meets regularly each week and in which student teachers participate, the high school pupils also have chances to work along their special interests.

Because some of the graduates are required to teach biology by other methods than those used in University High School, there is, in the department, a course in which other methods of presenting biological facts are considered, together with the philosophies that underlie these various methods.

All of the emphasis put by members of the department on the value of the study of materials can be practical because of the availability of materials. The Museum supplies a place where specimens can be variously grouped, where comparisons can be made, where forms not readily available can be observed. The plant house, where aquatic animals can be kept or even where terraria can be set up, offers a rich and stimulating source of experience and of materials. But the Museum and the plant house cannot take the place of the laboratory of the out-of-doors. Field studies, where organisms in their environments can be observed, offer one of the richest phases of biological work and are made through a considerable range in the state. To become aware of the life about one, to be alert to the changing conditions, to question, to answer,—these all make for a better prepared teacher, a happier citizenry. To become aware of the devastation of waste of earlier generations in their unwise treatment of nature's resources and to learn to be undertsanding and wise in the conservation of such resources give hope of a future for which an adequate supply is assured.

Conservation takes on many aspects, which include, among others, bacterial activities in soil enrichment through decay, bacterial activities in food production and food spoilation, activities of parasitic plants which destroy crops and produce disease, activities of animal parasites of domestic animals, which are sources of possible infestation of man and which lower the quality of the animals themselves, insect activities in crop destruction and crop production, as well as the regulation of game animals in their distribution and

control. Studies in these areas contribute much to the background of theory for the teacher. In addition to this value is another one, which follows as a natural result of the student's awareness of the relationship of his studies to the world in which he lives. This value is a feeling of equanimity and security arising from the knowledge that he may gain a livelihood in other fields of public service as well as in the commercial world should temporary depressions occur in the teaching profession.

Much has been said of the wise use of leisure time. Probably, as much as in any other field, biology offers a basis for many interesting and pleasurable occupations. Through a well-trained high school teacher, interested in the out-of-doors and having a basis for understanding the biological aspects of it, boys and girls and adults, too, can be guided in acquiring a knowledge of their surroundings and an appreciation possible through such knowledge which will lead to an enrichment of experience.

Science for the Elementary School Teacher

L. WALLACE MILLER*

IN recent years, science teaching in the elementary school has received a great deal of attention from administrators and teachers and is rapidly finding a prominent place in the curriculum. This situation is true not only in Illinois but throughout the United States. The contributions of science to health and safety and to the development of the economic and social order have long been recognized. The present emphasis upon child growth and development as a whole, upon self-expression and upon the need for experiential teaching in elementary schools has helped to focus attention on the natural science area as one of the most potential fields in which to build desirable attitudes, good habits of thinking, and adjustments for individuals in a practical way to their environment.

Modern elementary education made one of its most significant forward steps when it ceased to think in terms of adult life and emphasized guidance of the growing and developing child in real life situations. The physical and social world constitutes the two aspects of a child's environment. Obviously, the nearly universal and natural interest which children have in their physical surroundings provides unusual opportunities for engaging the attention of young people and for developing attitudes and outcomes in keeping with the broader, acceptable objectives in elementary education. Children are naturally curious about living things, both plants and animals, as well as about rocks, stars, electrical

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and mechanical devices, fire, magnets, and chemical changes.

Formerly, most of the emphasis in science teaching or nature study for young people was placed on the esthetic or cultural influence which observational study of the environment can give. Today this approach has been greatly expanded. Space does not permit a complete review of the past contributions. However, it should be pointed out that, at Illinois State Normal University, several scientists, connected with its early museum and with the teaching of science, anticipated the needs in the elementary field and received national recognition as leaders. The *Nature Study and Health Series* for each of the elementary school grades, written by Alice Jean Patterson in the late twenties, represents one of the first sequential presentations of elementary science to appear in the United States and is definitely the forerunner of the present science reader series and science units that are being published and that have been so well received.

The present marked reorganization in science teaching, the broadening of its objectives, the inclusion of added subject matter areas in this field, and the methods of presentation may be embodied in several noticeable trends:

(1) Definite provision is being made for science teaching in elementary school curricula.

Natural science is one of the five areas in the new Illinois Rural School Curriculum Guides, is one of the seven areas in the Missouri Courses of Studies published in 1937, and is generally included in many other recent state, city, and school reorganization efforts. Even though many schools today do little in elementary science, its future place in the elementary field is unquestioned. Teacher-training institutions would do well to give its inclusion careful consideration and should anticipate the needs that are sure to arise.

(2) It is recognized that these curricular provisions should embrace a continuous sequence of science instruction from the kindergarten through each of the grades.

Progress in elementary sciences has reached the point where incidental study is no longer tenable. This type of study tends toward omissions and duplications that are likely to obscure desired objectives and to lessen materially the effectiveness of such teaching. In many schools, such incidental teaching has resulted in litle or no science being taught. The other extreme is represented in a rigid subject matter outline. Such a course of study is likewise undesirable since grade placement of science topics and experiences has received comparatively little scientific study, since the background and environment of various city schools and rural communities are dissimilar, and since the great breadth of the science field provides a wealth of science experiences from which to select on the basis of individual needs and interests. Objectives and concepts for different grade levels, with suggestive activities, probably represent a workable basis for the logical introduction of science in the elementary school.

(3) The emphasis in subject matter

is upon those aspects of the environment which are most significant in the child's everyday life.

The immediate environment of children, their interests, and their abilities should be given first consideration. For example, in Illinois, an adequate study of the food and breeding habits of the garter snake, the wren, or some local animal ordinarily commands greater interest on the part of the pupil and more effectively adjusts the child to his environment than does the information on similar topics, obtained largely from books and concerned with the Gila monster, the African lion, or the whale. The child's experience and actual observation are utilized in a study of local creatures. From this study permanent consideration on the part of the child for living things may be realized, as well as ideals of conservation and attitudes that often are carried over into the social relationships of an individual.

At times, limited attention to exotic plants and animals and to topics not closely related to the child's environment may be justified in order to build up desirable attitudes and to broaden concepts. A study of plant and animal fossils may add much to the child's concept of time, evolution, and the influence of the past on present day conditions. A study of foreign animals may be a distinct aid in teaching the effects of climate on living things, or the great variation in animals and the bearing which this variation has on commerce and human affairs.

(4) Emphasis is shifting from a subject-matter mastery point of view to a more logical position, i.e., that facts of science build concepts and meaningful undertsandings which meet the needs of the child and society.

Facts are the means to an end. Since the individual child is the major concern, factual material should lend itself to the interpretation of life and the individual's adjustment to it. Mere observation and identification are not regarded as ends in themselves. For example, leaf collections, leaf drawings or the examination of various tree leaves by pupils will have little scientific value unless the work is made meaningful. Perhaps the variation in leaf margin, size, and shape may serve as the basis for the identification of trees. Again, to learn to identify trees is acquisition of knowledge that should be directed toward vital or practical consideration. Trees are useful to man. They provide shade, are beautiful, supply lumber and firewood, and retard soil erosion. We need to conserve them. It would be difficult for man to use trees effectively or apply principles of conservation to tree resources unless he knows their identity. To recognize trees in new locations, therefore, is practical and makes one's surroundings much more meaningful and enjoyable. Such aims and applications should constantly be in the mind of the teacher and should be learned by actual experiences on the part of the pupils.

The subject matter employed in developing concepts should be concrete and provide for as wide a variety of attitudes, habits, and skills as possible. These concepts should be ever broadening as the child advances through

the grades.

(5) Accuracy and the scientific method characterize both the content and the procedures in the elementary science movement.

Sentimentalities, teleology, and mystic interpretations are avoided. Animals talking or portrayed in pictures as wearing clothes, nature planning, and animistic interpretations of non-living objects have no place in science instruction. The spectacular phenomena, unusual creatures or objects in the child's environment should not overshadow the commonplace.

The scientific method entails first-hand observation, experimentation, repeating of experiments, patient study, delayed or suspended judgment, tolerance for the opinion of others, and a sincere desire to arrive at truth. Although the scientific method has been a part of the public schools for many years it never has reached a very high degree of development in the elementary schools. The splendid science readers, units, and teachers' manuals that have been published in very recent years in the field of elementary science show marked possibilities in this direction. It is not implied that many young people will become scientists but that a truly educated individual has a scientific attitude and scientific habits of thinking.

(6) The selection of subject matter is from all fields of science and is organized without regard to special sciences but rather in larger topics or units closely related to significant problems in the child's experience.

Electricity, mechanical devices, chemical changes, soil studies, and many other aspects of science were recently incorporated as their importance to children was realized. The broadening of the elementary science area, as well as the integration of the specific science fields, is very apparent in the published science materials in the last few decades. It is convenient and often difficult to disturb the traditional treatment of scientific subject matter and the logic and continuity of its organization. However, from the standpoint of the child, the separation of science into various fields is highly artificial. Children view life and their environment as a whole and are unable to comprehend the delineations and artificial entities which adults call science fields. Experience and investigations strongly support this generalized approach to science teaching in the elementary school.

The department of biological science at Illinois State Normal University is making a continuing effort in training students for elementary science training in order that these students may be able to meet as well as to anticipate the needs of the public schools. In 1937, Prof. Floyd T. Goodier, director of integration at Illinois State Normal University, called together, at the request of the department, certain members of the science and health departments of the University and critic teachers of the training schools to consider ways of coordinating their efforts toward more effective science training for out-going teachers. The discussion and exchange of ideas which were afforded at these meetings were mutually very helpful.

The informal relations between the science department and the training school were reaffirmed. Science outlines were exchanged by the University teachers of the so-called theory courses in science with the critic teachers. As a result, each feels free to call upon the other for assistance or to offer available help. These conferences clearly showed the need for further coordination of the activities of the University and the training school and the activities and objectives of the different grade levels of the training school.

The natural science courses, of which there are four at present, have been revised in recent years in accordance with certain suggestions from the training school, with trends already listed, and with needs in the field. These four courses are designed to provide the major background in science, with the exception of health, for the four-year elementary students. The laboratory type of instruction is being introduced. Integration of the sciences has been made. Since integrated science is the natural approach, students who, as prospective teachers, have had such training can make the necessary adjustments readily when they assume their duties in the elementary school situation. In considering, for example, the topic of the atmosphere and its effect upon living things, teachers will make use of subject matter from several science fields, such as chemical make-up of the air, temperature effects upon expansion and contraction and its relations to wind and precipitation, mechanical uses of the air in present day life, the relation of air to photosynthesis, respiration and sound, and the influence of air upon the distribution of plants, animals, and man.

The ten hours now assigned to the science area do not permit an adequate consideration of all phases of the science field with which teachers of science in elementary schools should be familiar. To meet this technical difficulty and the objectives of the courses at the same time, basic science principles are emphasized and illustrated by carefully selected topics and items on the college level. These topics are ones in which children are interested. This procedure admittedly does not provide for a very sysematic or complete treatment of the traditional science fields but does give opportunity to develop interest and a scientific attitude on the part of elementary school teachers as well as an approach to the teaching of elementary science as it should be taught in the elementary school.

Finally, another emphasis in the four courses in elementary science is that given to the practical and meaningful aspects of science. It is a departmental policy to teach only those aspects that have a bearing upon human welfare. This policy is in accordance with modern trends in education.

Some Aspects of a Functional School Health Program

ELIZABETH DEAN*

THE integrated school health program is a comparatively new inclusion in the public school and college. Since great expenditure has been made to finance school health service and education one might conclude, from the continued high frequency of remedial defects found in school children, and from draft board examinations, that there has been great waste of time and money. Any growing program, however, finds need for making changes to improve its efficiency, and health administration is recognizing that need. Health educators are realizing that without education for desirable use of an environment, and without information and desire to preserve an improved condition, the original condition frequently re-occurs, or new ones develop. Those who recognize the needless waste and expense involved in caring for ill and handicapped people do not find the cause to be an error in medical research or specific cures, but a failure to teach a practicable program of preventive sanitation, medicine, and hygiene.

Each year more public school systems are demonstrating that health protection and health education of school children are academically and economically sound and essential. Statistics and balance sheets are showing school administrators that it is a loss of personal efficiency and is a financial waste to disregard eye health and purchase glasses, to allow poor nutrition and correct dental defects, to save on soap and paper towel bills and suffer from school epidemics. Economic health programs, as the Detroit tuberculosis prevention program, Michigan's diphtheria control program, and Wisconsin's syphilis control program, are convincing communities that these and other costly diseases are preventable and unnecessary. It is also a financial waste to assume responsibility for teaching children who are not in sufficiently good health to profit from the teaching, or continue to employ teachers whose health or practices are poor examples.

If a more functional health approach is desirable, one that will give information and develop personal and group concern for high health ideals, it is the responsibility of every teacher training institution to provide the right kind of training and experiences to equip every class-room teacher to assist in the school health program. To be equipped the teacher should understand the implications of the objective of health education, should be able to recognize health needs, and should have concern to direct intelligent action in solving them. It likewise means that he is acquainted with available community, district, state, and national

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health agencies, and intelligently cooperates with their services to attain the desirable results of school health protection and education for the school.

The objective of school health education at Illinois State Normal University is the education of the individual to meet intelligently his own health problems, and cooperate in securing and maintaining optimal health protection for himself and the group. It is attained (1) through the study of as well as the creation of, a healthful environment, (2) through a thorough undertsanding of existing health services offered by the school and state agencies, and (3) through an analysis of the function of classroom instruction in the health program. Such an objective results in an integrated program, including not only the pivotal classroom instruction in health but also the work of the departments concerned with health service, physical education, and home economics as well as active cooperation with the director of local, state, and private health organizations.

The provision for a school environment in which the individual and the group can follow acceptable health practices is essential for a good educational program. It contributes not only to the health welfare of the individual, but likewise gives opportunities to call attention to desirable standards of practice and present approaches to health instruction.

The operation of a school plant to protect and further the health of the group offers many opportunities for health, problem finding, and problem solving. Problems pertaining to lighting, heating, ventilation, protection of a safe water supply, toilet and washing facilities, gymnasium equipment, and eating environment, all present educational opportunities for the adult or the child to learn the reason for, and the value of accepted standards.

A class-room the writer entered recently presented many opportunities for study and doing. Since it was a cloudy day, the eyes required a few minutes to accommodate themselves to the darkness. On three sides of the room there were closed windows with dirty panes. These windows were covered with black screens and lower sash curtains. Opaque shades covered several upper sashes. The wide wall spaces between the windows were covered with blackboards, the dirty ceiling and walls were dark, and the black oiled floor absorbed light. The twenty-eight children were languishing or coughing over their desks in a temperature of eighty-three degrees. A teacher with information and health concern and with interested assistance from the children and directors could have transformed that room. Eye strain and colds might have been largely controlled. The children would have learned a valuable lesson, namely, that one does not need to accept an unfavorable environment.

Students in the elementary curricula at Illinois State Normal University are given opportunities to study environmental health conditions through the health appraisal of a public school, as well as through campus problems. Assistance was secured in 1939-41 from the Illinois Society for the Prevention

of Blindness in a light study and light survey of the campus buildings. The survey was directed by the Health and Hospitalization Board of the Student Life and Welfare Committee, with the assistance of students and a light engineer from the local Power and Light Company. Lighting standards and practical methods of securing them were demonstrated in the health classes. The light survey not only presented conditions to be improved, but contributed to lighting improvements and decorating of the Metcalf Training School, and gave practice in planning for correct lighting. Sanitary janitor service was emphasized through a one-week janitor school held on the campus last summer under the direction of an expert from Columbia University. The demonstrations and class instruction, though primarily planned for the custodians, contributed to student study. Health classes have made also a series of cultures from drinking fountains. These cultures have shown the importance of proper care and use of the drinking fountains, as well as the relationship of their location to the toilets in preventing colon bacilli contamination.

In 1939, the Health and Hospitalization Campus Board, with the cooperation of the Health Committee of the Normal City Council, initiated a study of the public eating house standards. More frequent and extensive inspection of public eating places has resulted. The food inspector from the State Department of Agriculture, Division of Foods and Dairies, with represenatives from the Campus Board has promoted an educational type of inspection that has enlisted the cooperation of both food operators and student help in eating establishments. Training classes for student help in the eating establishments have been held, emphasizing the sanitary handling of food, adequate dish washing, and approved serving. A representative from the Division of Foods and Dairies is secured for these classes. He explains the significance of the sanitary code. A professor of bacteriology discusses the essential principles involved in dish washing, and students from eating houses demonstrate sanitary dish washing. Standards for serving are explained by an instructor of home economics, and are demonstrated by the home economics students. Through continued educational emphasis and inspection, standards of the public eating houses are being raised. By building in the student body a desire for selecting a safe and adequate eating place this training has its value.

Through inspection and by meeting with the householders and student groups, the campus housing board and the social deans have carried on a definite program for the improvement of student rooms, light house-keeping and private eating club conditions. The home economics and biology departments have cooperated in arranging practical lessons and demonstrations in food economics, meal planning, preparation of food, and sanitary dishwashing in the regular hygiene classes and for the men and women doing light housekeeping. Such efforts have resulted in better understandings and im-

proved practices.

The experiences of living at college afford many practical approaches in the health classes for improving personal health practices, for bettering social relationships, and for giving information that builds desirable health attitudes.

The health service of the University assumes the responsibility for the medical protection and direction of students. One of the functions of the classroom work in health education is to familiarize the prospective teacher with such services, both on the campus and in the public school system. The personnel of the school health service may include physicians, nurses, pediatricians, and psychiatrists employed by the school, or it may be recruited from renumerative or voluntary service of private or county employed physicians and nurses, or the members of the public health staff. In any case, the health service emphasizes the giving of a periodic health examination; special vision, hearing and dental inspection; the care of sudden illness and accidents; the prevention and control of communicable diseases; the promotion of mental health; a follow-up of cases referred to the family physician, or to the school departments for special corrective work, reduced loads, and prescribed nutrition. Adequate education of the parent and the child of public school age is an essential part of perpetuating child health. In the United States, medical diagnosis and treatment are responsibilities of the home and the family physician, or, in the case of indigent families, the home and the welfare agencies. Treatment for immediate conditions may be arranged for through the health service in some institutions, but the treatment of defects or disease lies outside the responsibility of the public school.

The Health Service, Student Life and Welfare Boards, and class attempt at Illinois State Normal University to direct students into an intelligent use of the campus health service through early diagnosis and care of illnesses and defects, and to encourage them to assume responsibility for life on the campus consistent with good health. Health guidance is given by the physician to the students after the health examinations, and by the faculty counselors who encourage students to attain and maintain optimal health. Preventive medicine and education have been emphasized in the prevention of colds, and a program of tuberculosis testing has been established for faculty and students. Every effort is made to correlate health service and education, for every experience of the health service should be of educational value to the future teacher.

The academic courses at Illinois State Normal University are planned to give instruction in personal and group hygiene to all entering freshmen, school hygiene dealing with the functional aspects of elementary school health programs to students in the elementary curricula, and elective courses concerned with modern health problems, bacteriology, and the human body.

As the department of health is primarily interested in the aspects of the functional health program wherever

it is administered by school, public health, or voluntary agencies, it is interested in knowing what preparation is given to equip future teachers to assume health responsibilities in their class-rooms. In view of the occasions offered by the direction of the school environment and the health service of the school for problem solving, it is apparent that in the University health classes, subject matter and experiences should be provided that will give information on fundamental concepts and practices in directing all types of health situations with children and parents. The elementary schools give opportunities for observing childhood characteristics, interests, and needs at different age levels. This observation in turn will lead to the approach of health instruction at the different grade levels. Methods and procedures, instructional devices, demonstrations and field trips appropriate for the different grade levels and related to the major health topics are studied. In health instruction, as in any other instruction, a sequence of related experiences is necessary for an understanding which will develop desirable attitudes and practices. The University students are given opportunities to develop at their grade level interest, integrated studies related to the activities of the child's school day and his experiences in his home. The social studies and natural science studies, in addition to the departments already mentioned, also offer excellent opportunities for integration.

Parent understanding and cooperation are particularly necessary if the giving of the periodic health examination, special inspections, weighing and measuring, rest periods, mid-morning and afternoon lunches are utilized as teaching opportunities. The student studies and participates in such experiences in class and in the training school. Dr. Ball from the State Public Health Division of Child Hygiene has for several years acquainted students here with the periodic health examination as given by their division to public school children. Her experience in working with public school teachers, with parent-teacher groups, and in the teacher institutes throughout the state contributes a special challenge to University students going out to assist with these activities in the public schools.

Since dental inspection is another service that may be secured by the public school from the State Public Health division of Dental Hygiene, a representative from that division discusses in the health classes the state dental educational and inspection program for the public school. The goal of the health department is to develop health ideas in every out-going class-room teacher, ideals that will challenge her to persist in indifferent school communities until she has secured a maximum of assistance from approved health agencies. and has increased the effectiveness of her own class-room efforts in education and follow-ups. A thorough understanding of the basis factors contributing to personal well-being are essential to any health instruction, such as nutrition, rest, exercise, posture, sanitation, eye and ear health, mental health, sex education, and safety.

Nutrition study for the child and

parent is particularly emphasized here. It is another example of where information may go no further than subject matter learned by the child if the teacher does not repeatedly acquaint the parents with the same information and convince them that adequate nutrition is as effective when given to the child and family as to prize livestock. The students visit the W. P. A. school lunch project, discuss the educational opportunities it affords for re-educating children in regard to eating habits and cooperation in meal planning in the home. It likewise offers opportunities to study the health hazards in equipment, personnel and dish washing introduced through the preparation and serving of food at school. Such study leads to class demonstrations of simple water and milk testing and culturing of bacteria from soiled hands, used silver, and dishes. The demonstrations are of value in convincing the student as well as the child and parents that the observance of certain concepts are very important in communicable disease control. For instance, the sanitarian recognizes the importance of chlorination in producing a safe water supply, and he also insists upon maintaining a source of water as free from contamination as possible. He likewise insists upon the production of clean milk, and considers pasteurization an additional safeguard. Parents and school administrators should not come to rely entirely upon immunization for the control of a few communicable diseases, but should supply needed equipment and should direct children in personal habits that will prevent the spread of any communicable disease. In other words, the sanitarian, the teacher, and the parent must go another step and teach the reasons why personal and group responsibility is needed to protect a safe water, milk, and food supply from human contamination.

The examples given of approaches to the integrated functional health program have emphasized the fact that it is an activity so important and specific in information that it cannot possibly be realized from incidental teaching. The future class-room teacher has a much greater assignment than casual class-room instruction. She will be expected to be the key-point of the new program. She must be capable of convincing directors and parents that condemned wells should be repaired and made safe, that a supply of hot water, soap, paper towels, and toilet paper is less expensive than formerly accepted epidemics developing from contaminated fountains and food. She will be required to have more and better training. Teacher training institutions will necessarily need to improve and increase their health courses to meet her needs.

Professional Activities of the Faculty

Miss EDNA MAY GUEFFROY, assistant professor of geography, has recently spoken on "Dolls from Here and There" before the Normal Eastern Star and the Women's Council of the First Methodist Church of Bloomington. These talks were illustrated with pictures of dolls from Miss Gueffroy's collection in Milner Library. Miss Gueffroy has also spoken on her trip to Alaska before the Trinity Parent-Teacher Association and the Women's Council of the First Christian Church, Bloomington.

JOHN W. GREEN, assistant professor of agriculture, spoke January 5 before the Carlock evening school for farmers upon the topic, "The Agricultural outlook for 1942." On January 12, he addressed the Easton evening school for farmers upon "Income Tax for Farmers."

Dr. CHARLES E. DECKER, director of the division of secondary education, has recently given a lecture, "Our Humors," before the Kiwanis Club of Farmer City, the Father-Son dinner at the Normal Christian Church, and the Community Association dinner at Eureka.

The *Classical Journal* for December, 1941, contains an article entitled, "Straightening Out the Latin Sentence," by Miss KATHERINE E. CARVER, assistant professor of Latin (emerita.)

Miss BERNICE TUCKER, assistant professor of the teaching of home economics, is a member of the state guiding committee for curriculum development in home economics. The committee met with the State Regional Supervisor of Home Economics at the University of Illinois on January 28.

Dr. L. W. MILLER, associate professor of biology, led a panel discussion on "The Excursion as a Supplement to Classroom Procedure" at the regular January meeting of the Taylorville Elementary Teachers' Association.

Miss BERNICE FREY, instructor in physical education, spoke before the young people of the Normal Presbyterian Church on January 11, using the topic, "Religion in Everyday Life." On January 29, she addressed the young people of the Second Prebyterian Church of Bloomington on "Presbyterism and Episcopalianism.

Dr. HARRY LATHROP, head of the department of geography, discussed "The Importance of Geography in Understanding World Problems" before the geography section of the Missouri State Teachers' Association at St. Louis on December 2. At the New York City meeting of the National Council of Geography Teachers on January 1, he spoke on "The Place of Geography in the New Illinois Curriculum for Elementary Schools."

THOMAS J. LANCASTER, associate

professor of education, read a paper on "This and That, Professionally Speaking" before the Bloomington-Normal College Alumni Club at its regular meeting, January 16.

In the December, 1941, issue of *School Management*, HOWARD J. IVENS, assistant professor of the teaching of science, has an article on "Why Teach Photography?"

The Central Division of the Illinois Council for Social Studies has elected Dr. L. GORDON STONE, supervising teacher in the Junior High School of the Illinois Soldiers and Sailors Childrens School, as president, and Miss Thalia Tarrant of the same school, as publicity chairman. Miss ALICE EBEL, instructor in the teaching of social science, is program chairman.

Miss FRANCES CONKEY, acting director of the division of home economics education, was elected president of the Illinois Home Economics Association at the annual meeting in Chicago last October. Miss Conkey has also been appointed Councillor for the Illinois Vocational Homemaking Teachers' Association.

Dr. VICTOR M. HOUSTON, associate professor of education, recently discussed character education in the home and school before the Danvers and Stanford Parent-Teacher Associations. Dr. Houston also served as the Chairman on the local campus for the Conference on Religion and Life, held on the campuses of Illinois Wesleyan and Illinois State Normal Universities last November.

Beginning the second semester, Dr. STANLEY S. MARZOLF, assistant professor of psychology, is teaching a class in psychology in the university high school. It is thought that this offering may serve as a preliminary step in a program of training teachers for the teaching of psychology for public high schools.

HOWARD J. HANCOCK, director of athletics, in November spoke on "Athletics in 1941," at the LeRoy High School Athletic Dinner, and on "Growth in Athletics" before the Taylorville Rotary Club, when the members of the high school football team were special guests. Coach Hancock also addressed recent alumni meetings at Streator, Joliet, and Lawrenceville.

Miss ELINOR B. FLAGG, assistant professor of mathematics, served as institute instructor at Peoria in November. On three different days she spoke on various aspects of arithmetic instruction.

During the fall, Miss GLADYS TIPTON, assistant professor of music, spoke on "Music for the Laymen" before the Dwight Woman's Club, and on "Music Education in Elementary Schools" at a clinic of music teachers and students at Eastern Illinois State Teachers College, Charleston.

Miss MARY BUELL, assistant professor of home economics, addressed the Jefferson School Parent-Teacher Association, Bloomington, in November on the subject, "Efficiency in Homemaking." During the same month, she discussed "Nutrition in Defense" be-

fore the Women's School of Affairs, meeting in Capen Auditorium.

Under the leadership of Dr. MARGARET COOPER, director of elementary education, an intensive study of the elementary curriculum has been under way since early last fall. Numerous meetings have been held in an endeavor to have the final revision of the program for training elementary teachers represent the consensus of faculty opinion. The study was undertaken largely to be ready for the increase in importance of the four-year elementary course under the new certification law, which provides that, after July 1, 1943, teachers must have four years of pre-service training in order to secure certificates through institutional credits.

On the day of the high school conference, Dr. C. A. DEYOUNG, head of the department of education, and FLOYD T. GOODIER, associate professor of education, discussed recent school legislation, before a section of the elementary teachers' conference at Illinois State Normal University. Later in the day, Dr. DeYoung discussed certain aspects of supervision before the high school principals' association at Champaign. On November 13, Dr. DeYoung had a prominent part in the visitation-study conference held at Quincy by the Illinois Association of Supervisors.

Dr. J. W. CARRINGTON, director of the training schools, Miss Elsie Brenneman, registrar, Dr. C. E. DECKER, director of the division of secondary education, and Dr. C. A. DEYOUNG, head of the department of education, all are members of state-wide committees representing the University of Illinois and the five state teachers colleges in planning for graduate work to be offered in the teachers colleges. Considerable progress has been made in the settlement of preliminary details.

Miss DOROTHY HINMAN, assistant professor of English, and Miss Grace Tucker, supervising teacher at the Illinois Soldiers and Sailors Childrens School, and FLOYD T. GOODIER, associate professor of education, served as instructors in a six-weeks training school for Bible school teachers held at the First Christian Church, Bloomington, during October and November.

Extension classes in education with L. W. HACKER, associate professor of education, as director, met at Taylorville and Springfield last semester and planned theoretically larger school units or districts for Christian and Sangamon counties, respectively. The project was an illustration of what might have been suggested by the county survey committee, had the county directors and board members decided to have the survey.

Miss MARY D. WEBB, assistant professor of the teaching of business education, is serving as treasurer of the Illinois State Commercial Teachers Association. She has also been appointed Illinois director for the Department of Business Education of the National Education Association.

Miss DOROTHY HINMAN, assistant professor of English, discussed recently published books for children, as a part

of the Pekin Public Library program, November 6. On November 10, she spoke before the Jefferson School P. T. A., Bloomington, on the contribution of books in establishing a child's attitude toward happiness, and on November 24 used the same subject in addressing the Woman's Improvement Lague of Normal.

Dr. RICHARD G. BROWNE, associate professor of social science, was a guest lecturer at the Chicago Junior College on October 3, speaking on the topic, "Party Organization and Invisible Government." On October 29 and November 27, he discussed current events before the Pontiac teachers, and on December 3, he spoke to the Taylorville Teachers on "Democracy in War Time."

In the October issue of the *Illinois Council for the Social Studies* is an article entitled, "Shall We Explore?" written by Miss THALIA J. TARRANT, supervising teacher at the Soldiers and Sailors Childrens School. Miss Tarrant has recently been appointed a member of the state committee on membership of the American Association of University Women.

During the first semester, extension classes were conducted at sixteen centers with nineteen teachers as directors and five hundred sixty students enrolled, according to CLARENCE ORR, associate professor of social science, who is in charge of extension courses. Mr. Orr reports for the second semester that three hundred ninety students have enrolled in seventeen classes at fifteen centers. Those centers are: Normal, Springfield, Danville, Mason City, Paxton, Clinton, Gilman, Gillespie, Weldon, Decatur, Pontiac, Lincoln, Morris, Watseka, and Gibson City.

At the Madison County Teacher Institute, held at Alton last October, Mrs. ROSE BUEHLER, supervising teacher in the Metcalf School, discussed the "New Rural Curriculum" and "Reading Activities in the Primary Grades."

Dr. ROSE PARKER, associate professor of education, discussed the State rural curriculum guides at the Paxton County Institute in September. Later she addressed the Gamma Chapter of Delta Kappa Gamma at Decatur on "Better Selection of Candidates for Teacher Education" and spoke before the teachers of La Porte, Indiana, on "New Demands on the Elementary Teacher."

Dr. LEWIS GORDON STONE, supervising teacher at the Soldiers and Sailors Childrens School, has an article entitled, "Reading Reactions for Varied Types of Subject Matter: An Analytical Study of the Eye-Movements of College Freshmen," in the September 1941 issue of the *Journal of Experimental Education.*"

At the Midwest Conference of Teacher Training Institutions, held at Chicago in October, Miss ETHEL M. BURRIS, assistant professor of education, reported upon the Reading Survey which she made at Illinois State Normal University last year. At the annual high school conference at the University of Illinois in November, Miss Burris served as resource person on the panel discussion dealing with

remedial reading in the small high schools.

Dr. DEWEY FRISTOE, supervising teacher of the Houghton affiliated school, has recently given his illustrated travel talk, "East and West with a Camera," before the community clubs of the Four-square, West Twin Grove, and California rural schools.

Miss I'ANNA JONTZ, instructor in health education, spoke to the nurses of the St. Joseph's Hospital, Bloomington, in November, on "Roads Ahead for the Registered Nurse." She also addressed the Lawrence School Parent-Teacher Association on "Common Health Problems of Little Children." Miss Jontz is a member of the State Nurses' Problems Committee of the office of the Department of Registration and Education.

On November 24, Miss EMMA KNUDSON, acting director of the division of music education, addressed the Lemont Parent-Teacher Association on "Music Education Today." The Music Education National Conference has recently appointed Miss Knudson to two committees: American Unity through Music Activities Survey and Exhibit, and Music Appreciation.

Mrs. STELLA HENDERSON, associate professor of education, spoke before the Collness Club of the First Methodist Church, Bloomington, on January 11. Her topic was "Values to Live By."

Miss RUTH ZIMMERMAN, assistant librarian, addressed the Parent-Teacher Association of the Irving School, Bloomington, November 19, on "Books and the Elementary School Library" and the Kindergarten Club of the Central School, Normal, December 3, on "Children and Books." During American Education Week, the Bloomington *Pantagraph* contained an editorial by Miss Zimmerman, entitled "Strengthening National Morale."

Miss GERDA OKERLUND, associate professor of English, addressed the Bloomington Woman's Club on November 25, using the topic "Three Refugee Writers."

At the annual high school conference at the University of Illinois, November 8, Dr. F. L. D. HOLMES, director of the division of speech education, spoke before the Speech Correction Section on "What the Speech Correction Teacher Should Know About Defective Speech."

Dr. R. W. FAIRCHILD, president of the university, spoke before the Madison County Teachers' Institute at Alton on October 17, the High School Principals' Section of the high school conference at Urbana on November 7, a citizens' mass meeting at Galesburg during American Education Week, and the Mid-West Publicity Conference at Bloomington, December 12.

Dr. ROBERT S. ELLWOOD, assistant professor of the teaching of social science, has been appointed chairman of the State Planning Committee for the Secondary School Curriculum Guide on the Social Studies. Before the social science section of the high school conference in November, Dr. Ellwood dis-

cussed "Teaching Current History" and on December 31, at a joint meeting of the American Historical Society and the National Council for the Social Studies, he spoke on "Teaching of Latin American History."

Dr. H. A. PETERSON, head of the department of psychology, is directing a survey to check the results of advertising in the Vidette.